



# Panel Radiator



THE ART OF HEATING...



★★★  
EN<sup>★</sup> EUROTHERM  
442

TESTED  
TO  
10  
BAR

# The line which reaches to 21'st Century in panel radiator...



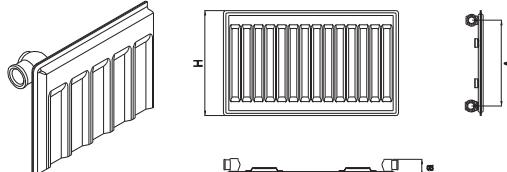
## RICH ALTERNATIVES

Alarko steel panel radiators provide possibility of selection of radiators which have dimensions most suitable to the heat requirement of environment and to the architectural and decorative design with their types produced in 5 different heights between 300-900 mm. and 21 different lengths between 400-1.800 mm. with an increment of 100 mm. and 2.000-3.000 mm. with an increment of 200 mm. They are coated in white colour (RAL 9016) as standard. Coating can be made in desired colours for special cumulative orders.

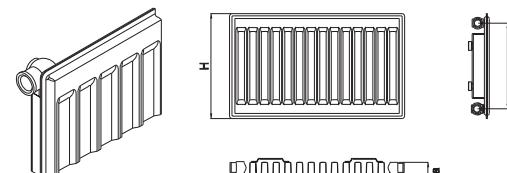


**TYPE 10 P**

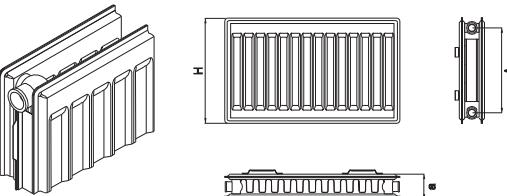
Standard width: a= 48 mm.

**TYPE 11 PK**

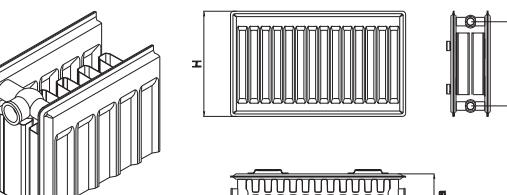
Standard width: a= 48 mm.

**TYPE 21 PKP**

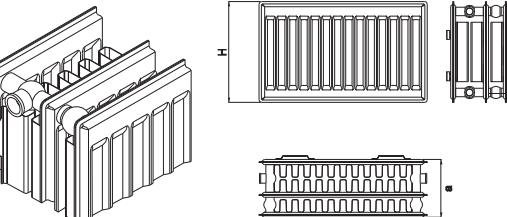
Standard width: a= 67 mm.

**TYPE 22 PKKP**

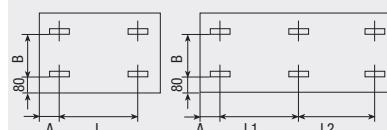
Standard width: a= 105 mm.

**TYPE 33 PKPKP**

Standard width: a= 160.5 mm.

**SUSPENSION BRACKET DIMENSIONS**

For lengths between 400-1700 mm.



RADIATOR HEIGHT	B
300	115
400	215
500	315
600	415
900	715

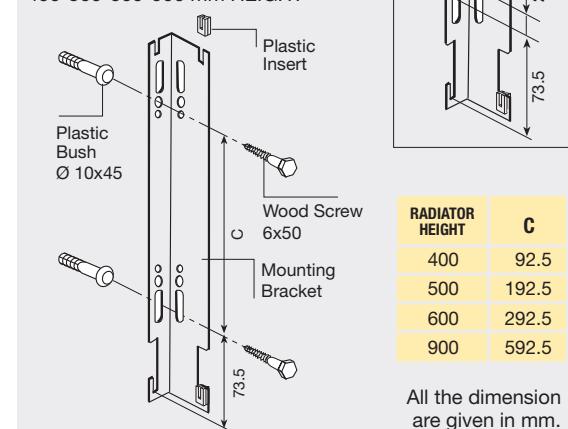
TYPE	DIMENSIONS (mm)		WEIGHT* (kg/m)	WATER CONTENT (Lt/m)
	HEIGHT (H)	A		
TYPE 10 P	300	245	5,8	1,8
	400	345	7,5	2,1
	500	445	9,7	2,5
	600	545	11,3	2,8
	900	845	16,8	4,0
	300	245	8,3	1,8
TYPE 11 PK	400	345	11,3	2,1
	500	445	12,7	2,5
	600	545	17,3	2,8
	900	845	26,0	4,0
	300	245	12,7	3,6
	400	345	17,1	4,2
TYPE 21 PKP	500	445	21,3	5,0
	600	545	26,0	5,6
	900	845	40,5	8,0
	300	245	14,5	3,6
	400	345	19,4	4,2
	500	445	24,5	5,0
TYPE 22 PKKP	600	545	29,5	5,6
	900	845	44,8	8,0
	300	245	22,0	5,4
	400	345	29,6	6,3
	500	445	36,6	7,5
	600	545	44,2	8,4
TYPE 33 PKPKP	900	845	67,5	12,0

\* Contact Alarko Carrier for the net weight information of the compact valve types or standard types with different lengths. Includes the weight of top and side covers.

**MOUNTING BRACKET DIMENSIONS**

300 mm The mounting bracket can be installed either on the wide or the narrow side, depending on the installation requirements.

400-500-600-900 mm HEIGHT



All the dimension are given in mm.

RADIATOR LENGTH	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700
Type: 10-20-21-22-33	L	133.3	233.3	333.3	433.3	533.3	633.3	733.3	833.3	933.3	1033.3	1133.3	1233.3	1333.3
KV 20-21-22-33	A	133.3	133.3	133.3	133.3	133.3	133.3	133.3	133.3	133.3	133.3	133.3	133.3	133.3
Type:11 - KV 11	L	167	267	367	467	567	667	767	867	967	1067	1167	1267	1367
A	116.5	116.5	116.5	116.5	116.5	116.5	116.5	116.5	116.5	116.5	116.5	116.5	116.5	116.5
Type: KV 10	L	68	168	268	368	468	568	668	768	868	968	1068	1168	1268
A	168	166	166	166	166	166	166	166	166	166	166	166	166	166

RADIATOR LENGTH	1800	2000	2200	2400	2600	2800	3000	
Type: 10-20-21-22-33	L1	766.7	866.7	966.7	1066.7	1166.7	1266.7	1366.7
KV 20-21-22-33	L2	766.7	866.7	966.7	1066.7	1166.7	1266.7	1366.7
A	133.3	133.3	133.3	133.3	133.3	133.3	133.3	133.3
Type: 11 - KV 11	L1	800	900	1000	1100	1200	1300	1400
A	766.5	866.5	966.5	1066.5	1166.5	1266.5	1366.5	1467
Type: KV 10	L1	734	834	934	1034	1134	1234	1334
A	166	166	166	166	166	166	166	166

KV: Compact valve type



## RADIATORS SUPPLIED WITH COMPACT VALVE

Alarko steel panel radiators can also be supplied with compact valve ensuring piping connection from the bottom side. This type of radiator provides savings in heating costs, when equipped with a thermostatic regulator.

## HIGH HEATING EFFICIENCY

Heating surfaces are increased by their special profile, water circulation channels with 33,3 mm pitch and high convectors directly welded onto these channels. They heat environment rapidly since their water content is little and heat outputs are high. More output is achieved from a smaller radiator.



**CONVERSION INFORMATION:** The values on the table are prepared for mean water temperatures 70°C and 80°C. For different operating temperature conditions, you can use "Panel Radiator Thermal Conversion Calculation Programme" under the "Product Selection" section in the Alarko Carrier website.

PANEL RADIATORS HEAT OUTPUT (kcal/h) - DIN EN 442																	
TYPE	Height (mm)	75/65 °C ( Mean Water Temperature 70 °C)							90/70 °C ( Mean Water Temperature 80 °C)								
		ROOM TEMPERATURE (°C)							ROOM TEMPERATURE (°C)								
		10	12	15	18	20	22	24	26	10	12	15	18	20	22	24	26
10 P	300	337	323	302	281	267	254	241	227	411	396	374	352	337	323	309	295
	400	430	412	385	358	341	323	306	289	524	505	477	449	430	412	394	376
	500	522	500	467	434	413	392	371	350	637	614	579	545	522	500	478	456
	600	617	590	551	512	487	462	437	412	754	726	685	644	617	590	564	538
	900	916	875	816	757	719	681	644	607	1.123	1.081	1.018	956	916	875	836	796
11 PK	300	545	521	486	451	428	406	384	362	667	642	605	569	545	521	497	474
	400	703	672	627	582	553	524	496	467	861	829	781	734	703	672	642	612
	500	854	817	762	708	673	637	603	569	1.046	1.007	949	892	854	817	780	744
	600	1.000	957	892	829	788	747	706	666	1.223	1.178	1.110	1.044	1.000	957	914	871
	900	1.401	1.341	1.252	1.164	1.106	1.049	992	937	1.712	1.649	1.555	1.462	1.401	1.341	1.281	1.222
21 PKP	300	786	751	700	649	616	583	551	519	966	930	875	821	786	751	717	683
	400	1.002	958	893	828	786	744	703	663	1.231	1.184	1.115	1.047	1.002	958	914	871
	500	1.203	1.150	1.072	995	944	894	845	797	1.476	1.420	1.337	1.256	1.203	1.150	1.097	1.046
	600	1.389	1.329	1.239	1.150	1.092	1.035	978	923	1.703	1.639	1.544	1.451	1.389	1.329	1.268	1.209
	900	1.874	1.793	1.673	1.556	1.478	1.402	1.326	1.252	2.290	2.205	2.079	1.956	1.874	1.793	1.713	1.634
22 PKKP	300	1.047	1.001	933	865	821	778	735	693	1.286	1.238	1.165	1.094	1.047	1.001	955	910
	400	1.341	1.282	1.195	1.109	1.053	997	942	888	1.646	1.584	1.492	1.401	1.341	1.282	1.224	1.166
	500	1.617	1.546	1.441	1.338	1.270	1.203	1.137	1.072	1.983	1.909	1.798	1.689	1.617	1.546	1.476	1.407
	600	1.877	1.795	1.674	1.554	1.476	1.398	1.322	1.247	2.301	2.214	2.086	1.960	1.877	1.795	1.714	1.633
	900	2.575	2.463	2.298	2.136	2.030	1.924	1.820	1.718	3.149	3.032	2.858	2.687	2.575	2.463	2.353	2.244
33 PKPKP	300	1.539	1.471	1.370	1.271	1.207	1.143	1.079	1.017	1.891	1.819	1.713	1.608	1.539	1.471	1.404	1.337
	400	1.949	1.863	1.736	1.611	1.529	1.448	1.368	1.290	2.393	2.303	2.169	2.036	1.949	1.863	1.778	1.694
	500	2.334	2.231	2.079	1.930	1.832	1.735	1.640	1.546	2.864	2.756	2.596	2.438	2.334	2.231	2.129	2.029
	600	2.699	2.581	2.405	2.233	2.120	2.008	1.898	1.790	3.311	3.186	3.001	2.819	2.699	2.581	2.463	2.348
	900	3.688	3.527	3.289	3.055	2.902	2.750	2.600	2.452	4.518	4.349	4.098	3.851	3.688	3.527	3.368	3.211

PANEL RADIATORS HEAT OUTPUT (Watt) - DIN EN 442																	
TYPE	Height (mm)	75/65 °C ( Mean Water Temperature 70 °C)							90/70 °C ( Mean Water Temperature 80 °C)								
		ROOM TEMPERATURE (°C)							ROOM TEMPERATURE (°C)								
		10	12	15	18	20	22	24	26	10	12	15	18	20	22	24	26
10 P	300	392	376	351	327	311	295	280	264	477	460	434	409	392	376	359	343
	400	500	479	447	416	396	376	356	336	610	587	554	522	500	479	458	437
	500	607	581	543	505	480	455	431	407	741	714	673	634	607	581	556	530
	600	717	686	641	596	566	537	508	479	876	844	796	749	717	686	656	626
	900	1.065	1.018	949	881	836	792	748	706	1.306	1.257	1.184	1.112	1.065	1.018	972	926
11 PK	300	633	606	565	524	498	472	446	421	776	747	704	661	633	606	578	551
	400	817	782	729	677	643	609	576	544	1.001	963	908	853	817	782	746	711
	500	993	950	886	823	782	741	701	661	1.216	1.171	1.103	1.037	993	950	907	865
	600	1.163	1.112	1.038	964	916	868	821	775	1.423	1.370	1.291	1.214	1.163	1.112	1.062	1.013
	900	1.629	1.559	1.455	1.353	1.286	1.220	1.154	1.089	1.991	1.917	1.808	1.700	1.629	1.559	1.490	1.421
21 PKP	300	914	874	814	755	716	678	640	603	1.124	1.081	1.018	955	914	874	833	794
	400	1.165	1.114	1.038	963	914	866	818	771	1.431	1.377	1.297	1.218	1.165	1.114	1.063	1.013
	500	1.398	1.337	1.246	1.157	1.098	1.040	983	927	1.716	1.651	1.555	1.461	1.398	1.337	1.276	1.216
	600	1.616	1.545	1.440	1.337	1.270	1.203	1.138	1.073	1.980	1.906	1.796	1.687	1.616	1.545	1.475	1.406
	900	2.179	2.085	1.946	1.809	1.719	1.630	1.542	1.456	2.663	2.564	2.418	2.274	2.179	2.085	1.992	1.900
22 PKKP	300	1.218	1.164	1.084	1.006	955	904	854	805	1.496	1.439	1.355	1.272	1.218	1.164	1.111	1.058
	400	1.560	1.491	1.389	1.289	1.224	1.159	1.096	1.033	1.914	1.842	1.735	1.629	1.560	1.491	1.423	1.356
	500	1.880	1.798	1.676	1.556	1.477	1.399	1.323	1.247	2.306	2.219	2.091	1.964	1.880	1.798	1.716	1.635
	600	2.183	2.087	1.946	1.807	1.716	1.626	1.537	1.450	2.675	2.575	2.426	2.279	2.183	2.087	1.993	1.899
	900	2.994	2.864	2.673	2.484	2.360	2.238	2.117	1.997	3.661	3.525	3.324	3.125	2.994	2.864	2.736	2.609
33 PKPKP	300	1.790	1.710	1.593	1.478	1.403	1.329	1.255	1.183	2.199	2.115	1.991	1.870	1.790	1.710	1.632	1.555
	400	2.267	2.167	2.019	1.873	1.778	1.684	1.591	1.500	2.783	2.678	2.522	2.368	2.267	2.167	2.068	1.970
	500	2.714	2.594	2.418	2.244	2.130	2.018	1.907	1.797	3.331	3.205	3.018	2.835	2.714	2.594	2.476	2.359
	600	3.139	3.001	2.797	2.597	2.465	2.335	2.207	2.081	3.850	3.705	3.490	3.278	3.139	3.001	2.864	2.730
	900	4.289	4.102	3.825	3.553	3.374	3.198	3.023	2.852	5.253	5.056	4.765	4.478	4.289	4.102	3.917	3.734

\*Capacities are based on tests conducted on radiators without top grilles and side panels.

Heat output values are given for 1 m radiator length.



A salon, bedroom, living room, child's room, kitchen, bath or office... All details have been considered in the careful search for an attractive decor that suits your personal taste and provides full comfort as well. From the picture on the wall to the carpet on the floor and the style of the arm chairs-every selection is important. In such a setting there is yet another, equally important selection to be made;

## The Radiator.



### **Chic and Decorative:**

Alarko steel panel radiators lend a chic and decorative aspect to the environment in which they are placed.



**Elegant:** Alarko steel panel radiators offer an elegance that is indispensable among those who know how to appreciate it.



**Different:** Alarko steel panel radiators are selected by discriminating people. This line is indeed extraordinary, a point not so easily reached-even by those who desire it!

**Quality:** Alarko steel panel radiators are produced and coated according to the latest technology on computer-controlled assembly lines. These highly efficient radiators are resistant to corrosion, chemicals, impact, scratches and ambient air conditions. The smooth surfaces don't collect dust, and the special covering system allows for easy cleaning.



**Multiple adaptations:** Alarko steel panel radiators, with their perfect designs and up-to-date production technology, are the excellent choice for use in multi-story buildings in which high operation pressure is required.

The various alternative sizes available and their compactness also make them suitable for smaller environments.

Alarko steel panel radiators can also be supplied with compact valve ensuring piping connection from the bottom side. This type of radiator provides savings in heating costs, when equipped with a thermostatic regulator.

**They sparkle:** Alarko steel panel radiators add sparkle to their environment.

# NEW PATENTED PACKAGING TECHNOLOGY



### SAFE PACKAGING

Alarko steel panel radiators are protected from exterior effects and impurities during transportation and installation by the merit of safe packaging.



- 1- Shrinkage foil
- 2- Bubble wrap foil
- 3- Corner protective plastic
- 4- Side panel protective cardboard
- 5- Label



Alarko steel panel radiators are produced in series and complying with DIN EN 442 through the high-tech computer controlled modern production lines established by Alarko Steel Panel Radiator Production Plant. The dies which are used in the production were prepared in Germany. Welding lines and test pool were designed in Switzerland. Surface preparation, coating and painting facilities have the most recent technology. The main casing of radiators is produced from cold rolled steel in conformity with EN standards.

### PERFECT PAINT, LONG LIFE

Alarko steel panel radiators are resistant to corrosion, exterior effects and impacts. Their outer appearances are perfect. They have long life. Because the inner and outer surfaces of radiators are completely cleaned by applying the operations of immersion and spray oil taking, iron phosphate coating and passivation respectively in conformity with DIN 55900 and completely purified from chemical substances which effect the quality of paint. Radiators which are primer coated by the immersion method and baked are rebaked by being painted with the method of electrostatic powder-coating through robot spray in a climatized cabin.

In addition to standard panel radiator tests, Alarko panel radiators are tested to moisture conditions in humidity cabins in

conformity with EN 442. Plus, radiators are tested under more corrosive salty water test condition. Thus, both the lifetime and quality of surface and painting operations, and resistance against moist conditions are tested.

### DURABLE, IMPERMEABLE

In standard production radiators leaving the production line are individually controlled in the special test tank under the pressure of 10 bars, allowing a maximum operating pressure of 7,7 bars. Allowed maximum operating temperature is 120°C.

### EASY INSTALLATION

Alarko steel panel radiators are preferred and recommended by assembly workers due to their sensitive sizes, slightness and mountability without unpacking.



The right to amend specifications under technologic developments is reserved.



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